Application Serial No. **10/711,081** **PATENT**
Docket No. **56646-0001**

REMARKS

The Examiner is thanked for the thorough review of the subject application.

In the Office Action, the Examiner rejected claims 1-4, 6-10, 12 and 27 under 35 USC 103(a) as being obvious in view of US Patent No. 5,604,299 to Cobb (hereinafter "Cobb"). The Examiner rejected claim 13 under 35 USC 103(a) as being obvious in view of US Patent No. 5,879,943 to Ando et al. (hereinafter "Ando") combined with Cobb. The Examiner also objected to the form of claim 1.

As indicated above, claim 1 is amended to address the Examiner's objection.

The Examiner's allowance of claims 11, 14-15, 17 and 18 is noted. The withdrawal of the allowance of claims 5-9 and 13 is also noted.

The Examiner's obviousness rejections of the claims 1-4, 6-10, 12 and 27 in view of Cobb and claim 13 in view of Cobb taken in combination with Ando has been carefully considered, but are traversed with all due respect for the reasons that follow.

Independent claim 1 is directed to a method of determining a source of emissions and includes the step of "superimposing known emission concentrations upon the sensors during a first monitoring cycle to enhance sensor sensitivity". The Examiner relies on Cobb to reject claim 1 as being obvious. While the Examiner admits that Cobb does not specifically teach

superimposing known emission concentrations upon the sensors during a first monitoring cycle, the Examiner alleges that "the method Cobb discloses would operate equally as well if using the sensors to sense a known emission concentration as opposed to an unknown concentration". In support, the Examiner cites Cobb at Col. 3, lines 37-43:

> ...The sensed measurements of concentration, wind direction, wind speed and time may be recorded by a data logging system, which may be of any convenient type, preferably a general purpose computer operating under the control of an algorithm adapted to record the information on magnetic tape or disc.

The foregoing passage is limited to the statement that concentration, wind speed, and wind direction measurements may be recorded by a data logging system. With all due respect, it is submitted that Cobb does not teach or suggest the limitation of "superimposing known emission concentrations upon the sensors during a first monitoring cycle" as recited in claim 1. Based on a careful reading, Cobb does not consider or address enhancing the sensitivity of the sensors in a first monitoring cycle. In view of these deficiencies, it is submitted that there is no motivation or basis for one skilled in the art to modify the teachings of Cobb, and therefore the invention as defined by claim 1 is not obvious in view of Cobb. In fact the present invention as defined by independent claim 1 represents in the very least a patentable improvement and advance over Cobb. Since claims 2, 4, 9, 10 and 12 depend from claim 1, it is submitted that these claims are also not obvious for the same reasons.

Independent claim 3 is directed to a method of determining a source of emissions and recites the step of "superimposing known emission concentrations upon the sensors during a monitoring cycle to enhance sensor sensitivity". The Examiner again relies on Cobb to reject

claim 3 as being obvious. While the Examiner admits that Cobb does not specifically teach superimposing known emission concentrations upon the sensors during a first monitoring cycle, the Examiner alleges that "the method Cobb discloses would operate equally as well if using the sensors to sense a known emission concentration as opposed to an unknown concentration". In support, the Examiner cites Cobb at Col. 3, lines 37-43:

> ...The sensed measurements of concentration, wind direction, wind speed and time may be recorded by a data logging system, which may be of any convenient type, preferably a general purpose computer operating under the control of an algorithm adapted to record the information on magnetic tape or disc.

With all due respect, it is submitted that Cobb does not teach or suggest the claimed limitation of "superimposing known emission concentrations upon the sensors during a monitoring cycle to enhance sensor sensitivity". In view of these deficiencies, it is submitted that there is no motivation or basis for one skilled in the art to modify the teachings of Cobb, and therefore the invention as defined by claim 3 is not obvious in view of Cobb. It is submitted that the present invention as defined by independent claim 3 represents at the very least a patentable improvement or advance over Cobb.

Independent claim 6 is directed to a method of determining a source of emissions, and recites the step of "superimposing a gas compound that will react with the emissions and the sensors will measure the reaction products as a way to amplify or isolate a signal of the emissions". The Examiner admits that "Cobb does not specifically disclose superimposing a gas compound that will react with the emissions and the sensors will measure the reaction products as a way to amplify or isolate a signal of the emissions". However, the Examiner relies on Cobb

at Col. 3, lines 37-43 to allege that "the method Cobb discloses would operate equally as well if using such a gas compound". With all due respect, it is submitted that Cobb does not teach or suggest the claimed limitation of superimposing a gas compound that will react with the emissions and the sensors will measure the reaction products as a way to amplify or isolate a signal of the emissions. In fact based on a careful reading, Cobb does not address emission signal amplification or isolation techniques at all. The passage cited by the Examiner is limited to the statement that concentration, wind speed, and wind direction measurements may be recorded by a data logging system. In view of these deficiencies, it is submitted that there is no motivation or basis for one skilled in the art to modify the teachings of Cobb, and therefore the invention as defined by claim 6 is not obvious in view of Cobb. It is again submitted that the present invention as defined by independent claim 6 represents a patentable improvement or advance over Cobb.

Independent claim 7 is directed to a method of determining a source of emissions, and recites the step of "superimposing a gas compound that will react with a gas that causes interference as a way to remove the interference and amplify or isolate a signal of the emissions". The Examiner admits that "Cobb does not specifically disclose superimposing a gas compound that will react with the emissions and the sensors will measure the reaction products as a way to amplify or isolate a signal of the emissions". However, the Examiner relies on Cobb at Col. 3, lines 37-43 to allege that "the method Cobb discloses would operate equally as well if using such a gas compound". With all due respect, it is submitted that Cobb does not teach or suggest the claimed limitation of superimposing a gas compound that will react with a gas that causes interference as a way to remove interference and amplify or isolate a signal of the

emissions. In fact, Cobb does not address emission signal amplification or isolation by interference techniques. The passage cited by the Examiner is limited to the statement that concentration, wind speed, and wind direction measurements may be recorded by a data logging system. In view of these deficiencies, it is submitted that there is no motivation or basis for one skilled in the art to modify the teachings of Cobb, and therefore the invention as defined by claim 7 is not obvious in view of Cobb. It is again submitted that the present invention as defined by independent claim 7 represents an improvement and advancement over Cobb.

Independent claim 8 is directed to a method of determining a source of emissions, and recites the step of "superimposing a gas compound that will coat the surface of the sensors with reaction products that make the sensors hyper-sensitive or hyper-specific to the emissions". The Examiner admits that Cobb does not specifically disclose superimposing a gas compound that will coat the surface of the sensors with reaction products that make the sensors hyper-sensitive or hyper-specific to the emissions. However, the Examiner relies on Cobb at Col. 3, lines 37-43 to allege that "the method Cobb discloses would operate equally as well if using such a gas compound". With all due respect, it is submitted that Cobb does not teach or suggest the claimed limitation of superimposing a gas compound that will coat the surface of the sensors with reaction products that make the sensors hyper-sensitive or hyper-specific to the emissions. Based on a careful reading of Cobb, the feature of making the sensors hyper-sensitive or hyper-specific to emissions is not discussed or addressed, and the passage cited by the Examiner is limited to the statement that concentration, wind speed, and wind direction measurements may be recorded by a data logging system. In view of these deficiencies, it is submitted that there is no motivation or basis for one skilled in the art to modify the teachings of Cobb, and therefore

the invention as defined by claim 8 is not obvious in view of Cobb. It is again submitted that the present invention as defined by independent claim 8 represents in the very least a patentable improvement or advance over Cobb.

Independent claim 27 is directed to a method of determining a source of emissions, and recites the step of "superimposing known emission concentrations upon the sensors during a monitoring cycle to enhance sensor sensitivity". The Examiner admits that Cobb does not specifically disclose superimposing known emission concentrations upon the sensors during a monitoring cycle for enhance sensor sensitivity. However, the Examiner relies on Cobb at Col. 3, lines 37-43 to allege that "the method Cobb discloses would operate equally as well if using the sensors to {no verb} a known emission concentration as opposed to a unknown concentration". With all due respect, it is submitted that Cobb does not teach or suggest the claimed limitation of superimposing known emission concentrations upon the sensors during a monitoring cycle for enhance sensor sensitivity. The feature of enhancing sensor sensitivity is not discussed or addressed by Cobb, and the passage cited by the Examiner is limited to the statement that concentration, wind speed, and wind direction measurements may be recorded by a data logging system. In view of these deficiencies, it is submitted that there is no motivation or basis for one skilled in the art to modify the teachings of Cobb, and therefore the invention as defined by claim 27 is not obvious in view of Cobb. It is again submitted that the present invention as defined by independent claim 27 represents in the very least a patentable improvement or advance over Cobb.

Independent claim 13 is directed to an embodiment of a method of determining a source of emissions, and includes the step of "providing a humidity module to maintain sensor operation at an ideal operational humidity level". The Examiner has rejected claim 13 as being obvious based on Cobb taken in combination with Ando. Cobb does not disclose or teach a humidity module and the Examiner relies on Ando to overcome the deficiencies of Cobb. The Examiner's rejection of claim 13 as being obvious in view of Cobb and Ando is traversed with all due respect. Cobb is not concerned with the effects of humidity on sensor operation, while Ando is concerned with humidity detection or measurement. Moreover, the humidity detection according to Ando is not the same as the humidity control step recited in claim 13. In view of these deficiencies, there is no motivation for one skilled in the art to combine the teachings of Ando and Cobb. Furthermore, even if one skilled in the art were to combine the teachings of Ando and Cobb, the resulting method would not be the same as that recited by claim 13. In particular, Ando does not teach or suggest the claimed limitation of employing "a humidity module to maintain sensor operation at an ideal operational humidity level". It is therefore submitted that claim 13 is not obvious in view of Cobb combined with Ando.

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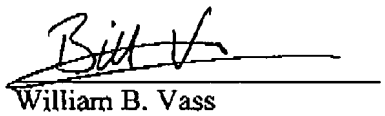
In view of the foregoing, reconsideration of the outstanding rejection and allowance of the pending claims is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of the subject application, the Examiner is invited to telephone Bill Vass at 416-777-7490, collect if necessary.

Respectfully submitted,

DENNIS S. PRINCE



William B. Vass
Registration No. 36,416

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Toronto, Ontario, Canada

DMSTOR:Legal\056646\00001\512039v1